

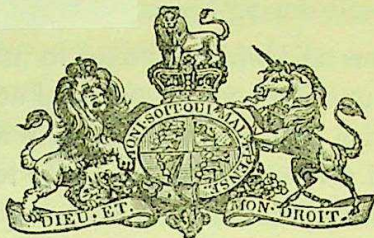
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Second Edition.]

99. FOODS AND BEVERAGES

51

Preserg Beer & Wine



A.D. 1868, 20th JULY. N° 2274.

Brewing.

LETTERS PATENT to Edward Beanes, of Cordwalles, near Maidenhead, in the County of Berks, for the Invention of "IMPROVEMENTS IN BREWING."

Sealed the 22nd December 1868, and dated the 20th July 1868.

PROVISIONAL SPECIFICATION left by the said Edward Beanes at the Office of the Commissioners of Patents, with his Petition, on the 20th July 1868.

I, EDWARD BEANES, of Cordwalles, near Maidenhead, in the County of Berks, do hereby declare the nature of the said Invention for "IMPROVEMENTS IN BREWING," to be as follows:—

My Invention for improvements in brewing consists in the use of sulphurous acid in the state of gas or its aqueous solution, or of sulphite or bi-sulphite of soda, potash, or lime, or any other salt of sulphurous acid applied to the brewing materials (malt or sugar) either before their entrance into the mash tun, during the process of mashing, or before or

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during the boiling of the wort with the hops, but I prefer to use the sulphurous acid or its salt during the mashing process.

The salt of sulphurous acid which I prefer to use is an acid sulphite or bi-sulphite of soda, containing a slight excess of acid, in such proportions that an aqueous solution of the same will give a slightly red color to 5 blue litmus paper, and a very pale lead color to red litmus paper, and I use about twenty ounces of the said salt to each quarter of malt, or when sugar is used for brewing about twenty ounces to two hundredweight of sugar.

When I employ sulphurous acid itself instead of its salts I prefer 10 to allow the crushed malt to fall through an atmosphere of sulphurous acid gas on its way to the mash tun. The brewing operations are conducted in the usual manner.

The use of the afore-mentioned materials in the manner above described does not prevent the proper fermentation of the wort, as the 15 sulphites and bi-sulphites are converted into sulphates during the process of boiling the wort with the hops. The result is the production of a beer which is light in color, brightens quickly, keeps well, and is excellent in quality.

SPECIFICATION in pursuance of the conditions of the Letters Patent, 20
filed by the said Edward Beanes in the Great Seal Patent Office on
the 20th January 1869.

TO ALL TO WHOM THESE PRESENTS SHALL COME, I, EDWARD BEANES, of Cordwalles, near Maidenhead, in the County of Berks, send greeting. 25

WHEREAS Her most Excellent Majesty Queen Victoria, by Her Letters Patent, bearing date the Twentieth day of July, in the year of our Lord One thousand eight hundred and sixty-eight, in the thirty-second year of Her reign, did, for Herself, Her heirs and successors, give and grant unto me, the said Edward Beanes, Her special licence, that 30 I, the said Edward Beanes, my executors, administrators, and assigns, or such others as I, the said Edward Beanes, executors, administrators, and assigns, should at any time agree with, and no others, from time to time and at all times thereafter during the term therein

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expressed, should and lawfully might make, use, exercise, and vend, within the United Kingdom of Great Britain and Ireland, the Channel Islands, and Isle of Man, an Invention for "IMPROVEMENTS IN BREWING," upon the condition (amongst others) that I, the said Edward Beanes, my
5 executors or administrators, by an instrument in writing under my, or their, or one of their hands and seals, should particularly describe and ascertain the nature of the said Invention, and in what manner the same was to be performed, and cause the same to be filed in the Great Seal Patent Office within six calendar months next and immediately after the
10 date of the said Letters Patent.

NOW KNOW YE, that I, the said Edward Beanes, do hereby declare the nature of my said Invention, and in what manner the same is to be performed, to be particularly described and ascertained in and by the following statement in writing, that is to say:—

15 My Invention of improvements in brewing consists in the use of sulphurous acid in the state of gas or its aqueous solution or of acid sulphites or bi-sulphites of sodium, potassium, calcium, magnesium, ammonium, or aluminium. These chemical agents are applied to the brewing materials, such as malt or sugar, directly or mixed with the
20 water added to them before their entrance into the mash tun during the process of mashing or during the process of boiling the wort with the hops, but I prefer to operate during the mashing and with the aqueous solution or the salts of sulphurous acid.

I am aware that some attempts have been made heretofore to preserve
25 brewed liquors that have undergone the process of fermentation by adding to them solutions of sulphurous acid or acid sulphites or bi-sulphites, but such attempts have always been confined to applications of the chemical agents to the liquors after the fermentation has taken place with the view of thereby remedying the tendency of the fermented
30 liquors to become sour. The common experience of brewers would have led them prior to the date of my Invention to anticipate that the chemical agents used by me would have an injurious effect upon the fermentation process if used at the stages proposed by me, and that the brewed liquor would be thereby spoiled. I have however discovered that
35 by applying the above-mentioned chemical agents as herein described the tendency of the brewed liquor to become sour is prevented, the quality of the brewed liquor is greatly improved, and it keeps very

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much longer than beer brewed on the old system. I prefer to use acid sulphite of sodium, the aqueous solution of which will give a slight red color to blue litmus paper, and a very pale lead color to red litmus paper, and I use from about sixteen to about twenty ounces of the said salt to each quarter of malt, or when sugar is used for brewing 5 from about sixteen to twenty ounces of the salt to two hundred pounds weight of sugar.

When I employ sulphurous acid itself instead of its aqueous solution or its salts I prefer to allow the crushed malt to fall through an atmosphere of sulphurous acid gas on its way to the mash tun. 10

The brewing operations are conducted in the usual way, and as above mentioned I apply the chemical agent by preference as follows:— When the water in the mash tun is prepared to receive the malt, and while the latter is being delivered into the mash tun, I introduce for every quarter of malt from sixteen to twenty ounces of the acid sulphite 15 of soda at the same time, so that while the mixing of the malt with the water is going on the salt of sulphurous acid becomes incorporated with it.

In cases where, as sometimes is the practice, the mixing of the malt with the water or a portion of the water takes place prior to their 20 entrance into the mash tun I prefer to mix the salt of sulphurous acid with the dry malt, so that it may become incorporated with the malt when the malt and water are mixed together. Sometimes I dissolve the salt of sulphurous acid in the water either before or after heating the latter and before mixing the malt with it, or a portion of the salt 25 of sulphurous acid may be put into the water and the remainder in the malt as above mentioned. When I introduce the salt of sulphurous acid into the copper during the process of boiling the wort with the hops I prefer to do so just when the wort is on the point of boiling. The rest of the brewing operation is concluded in the usual way. The 30 result of the adoption of this Invention will be the production of beer which is light in color, which brightens quickly, keeps well, and is excellent in quality.

I claim in the process of brewing, the treating the brewing materials with sulphurous acid or the salts of sulphurous acid herein-before 35 mentioned before their entrance into the mash tun during the process of mashing or during the process of boiling the wort with the hops,

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and consequently before the fermentation of the liquor has taken place, and the production thereby of an improved quality of beer.

5 In witness whereof, I, the said Edward Beanes, have hereunto set my hand and seal, this Fifteenth day of January, in the year of our Lord One thousand eight hundred and sixty-nine.

EDW^d. BEANES. (L.S.)

Witness,

BRISTOW HUNT,

Solicitor and Patent Agent,

10 1, Serle Street, Lincoln's Inn.

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